A. Esophageal Stenting and related topics

GIE 2009; 70; 4:614-619

Placement of Polyflex stents in patients with locally advanced esophageal cancer is safe and improves dysphagia during neoadjuvant therapy

Douglas G. Adler, MD

Background
Patients with locally advanced esophageal cancer who require neoadjuvant therapy have significant dysphagia.

Objectives
To prospectively evaluate Polyflex stents to treat malignant dysphagia and to ameliorate weight loss in patients with locally advanced esophageal cancer who will undergo neoadjuvant therapy.

Design
A prospective nonrandomized study.

Setting
Tertiary-referral cancer center.

Patients
Thirteen patients with esophageal cancer (11 adenocarcinoma, 2 squamous-cell carcinoma). All patients were men, with a mean age of 63 years.

Interventions
EUS followed by stent placement.

Main Outcome Measurements
Dysphagia scores and patient weights.

Results
There were no perforations and no episodes of bleeding. Immediate complications included chest discomfort in 12 of 13 patients. The mean dysphagia score at the time of stent placement was 3. Mean dysphagia scores obtained at 1, 2, 3, and 4
weeks after stent placement were 1.1 (P = .005), 0.8 (P = .01), 0.9 (P = .02), and 1.0 (P = .008), respectively. Stent migration occurred at some point in 6 of 13 patients (46%).

Limitations
A single center and small size of study.

Conclusions
Simultaneous EUS staging and Polyflex stent placement is safe and allows oral feeding during neoadjuvant therapy. Dysphagia scores improved in a statistically significant manner. Stent migration was a common event, although not all patients with a migrated stent will require stent replacement, because migration may be a sign of tumor response to neoadjuvant therapy.

GIE 2009; 70; 4:620-622
Stent placement in esophageal cancer as a bridge to surgery
Frank P. Vleggaar, MD, PhD

The article was published as free.

Dig Surg 2009; 26:322-328
Management of Esophageal Perforation: Experience from a Tertiary Center in India
Anbalagan Amudhan

Background/Aim:
The management of esophageal perforations remains controversial in large part due to variability in etiology, time of presentation, location, and underlying esophageal disease. We reviewed our experience in treating patients with esophageal perforations and evaluated the etiology, management and outcome of intervention in a tertiary center.

Methods:
Between 1999 and 2007, 48 patients with esophageal perforation were treated in a tertiary referral center in southern India. Postdilatation corrosive stricture perforations constituted the major etiology.

Results:
Thirty (62.5%) patients were diagnosed early (<24 h) and the remaining 18 (37.5%) were late (>24 h). The 30-day mortality was 6.2%, and mean hospital stay was $13 \pm 9.3$ days. Comparing outcomes between early and late groups, statistically significant difference was observed, with increased mortality ($p = 0.02$) and hospital stay ($p = 0.04$) following late diagnosis.

Conclusion:
This report suggests that early diagnosis decreases mortality and hospital stay in esophageal perforation. Preservation of esophagus may be attempted while treating esophageal perforations.

B. Gastric outlet (GO) and duodenal stenting and related topics

AMJG 2009; 104:2404–2411

Improved Oral Intake After Palliative Duodenal Stenting for Malignant Obstruction: A Prospective Multicenter Clinical Trial
Michael Piesman MD

OBJECTIVES:
We sought to test the hypothesis that placement of a new nitinol duodenal self-expandable metallic stent (SEMS) for palliation of malignant gastroduodenal obstruction is effective and safe in allowing patients to tolerate an oral diet.

METHODS:
a prospective multicenter study, SEMSs (Duodenal WallFlex, Boston Scientific) were placed to alleviate gastroduodenal obstruction in inoperable patients without the ability to tolerate solid food. The primary study end point was improvement in oral intake monitored according to the 4-point Gastric Outlet Obstruction Scoring System (GOOSS) up to 24 weeks after stent placement.

RESULTS:
Forty-three patients received SEMSs, which were successfully deployed on the first attempt in 41 cases (95%) and the second attempt in two (5%). Within 1 day and 7 days after SEMS placement, 52% and 75% of patients, respectively, benefited from a GOOSS increase 1. Resumption of solid food intake (GOOSS 2–3) was attained by 56% of patients within 7 days and 80% by 28 days. Of the patients attaining GOOSS 2–3, 48% remained on solid food until death or last follow-up. Device-related adverse events included stent occlusion/malfunction in 9% of patients and perforation in 5% of patients.

CONCLUSIONS:
Duodenal WallFlex stent placement promptly improves oral intake in a majority of inoperable patients with malignant gastroduodenal obstruction. In approximately half the patients achieving GOOSS 2–3, the capacity for solid food intake endures until death or last follow-up.

GIE 2009; 70; 4:778-779
The duodenal stent-in-stent: a stent at the crossroads
Harry Aslanian, MD

The article was published as free.

C. Biliary and pancreatic stenting, and related topics

AMIG 2009; 104:2412–2417
An Analysis of the Factors Associated With the Development of Complications in Patients Undergoing Precut Sphincterotomy: A Prospective, Controlled, Randomized, Multicenter Study
Gianpiero Manes MD

OBJECTIVES:
Precut is performed when biliary access at endoscopic retrograde cholangiopancreatography (ERCP) fails. Precut may have adjunctive risks, but some authors have suggested that the attempts to cannulate the papilla that precede precutting cause complications. We evaluated the role of the timing of precut in determining the development of complications and with respect to the other factors involved.

METHODS:
During ERCP, after 10 min of attempts to cannulate, patients were randomized to an early-precut group (n=77) undergoing precut immediately or a late-access group (n=74) in which cannulation was attempted for 10 further minutes before the endoscopist was free to perform precut or to persist in cannulation. Occurrence of complications and the associated risk factors were recorded.

RESULTS:
The two groups were similar for general characteristics. The number of attempts to cannulate, the number of pancreas injections, and the incidence of acinarization were higher in the late-access group. The cannulation rate was 94%. The incidence of overall complications was similar, but the pancreatitis rate was higher in the late-access group (14.9 vs. 2.6%,
P=0.008). Amylase levels increased by 398.9879.4 in the early-precut group and 833.61478.4 in the late-access group (P=0.029). Nondilated bile duct and pancreatic injection were related to the development of pancreatitis, whereas the performance of precut was related to other complications.

CONCLUSIONS:
Early precut is associated with lower pancreatitis rate, suggesting that pancreatitis develops as a consequence of the attempts to cannulate the papilla and pancreatic injection, and not precutting.

AMJG 2009; 104:2418–2421
Effect of Biliary Stenting Combined With Ursodeoxycholic Acid and Terpene Treatment on Retained Common Bile Duct Stones in Elderly Patients: A Multicenter Study
Jimin Han MD, PhD

OBJECTIVES:
For frail, elderly patients with large impacted common bile duct (CBD) stones, long-term treatment with biliary stenting provides palliation. Biliary stenting with choleretic agents such as ursodeoxycholic acid (UDCA) and terpene preparations may promote CBD stone size reduction. We studied the effectiveness of biliary stenting combined with UDCA and a terpene preparation as a medical treatment for difficult-to-remove CBD stones in patients older than 65 years in this multicenter, prospective study.

METHODS:
A total of 28 elderly patients with CBD stones refractory to conventional endoscopic removal, including mechanical lithotripsy, underwent endoscopic placement of a straight 10-F plastic biliary stent. Each patient was administered 600 mg of UDCA and 300 mg of a terpene preparation daily for a mean of 6 months. After 6 months of medication following the initial endoscopic retrograde cholangiopancreatography (ERCP), a second ERCP was performed and endoscopic stone removal was again attempted. Differences in stone size and CBD diameter before and after biliary stenting and medication were compared. The complete stone removal rate after treatment was obtained.

RESULTS:
The mean size (transverse longitudinal diameter) of the CBD stones was initially 21.6 29.5 mm, and it decreased significantly to 12.2 20.1 mm at the second ERCP (P<0.01). The mean CBD diameter measured initially at the cystic duct insertion level was 23.2 mm, and it decreased significantly to 19.5 mm at the second ERCP (P<0.01). After biliary stenting with medication, endoscopic stone removal was successful in 26 of 28 patients (92.8%), with a mean of 1.7 subsequent ERCP sessions.
CONCLUSIONS:
Endoscopic biliary stenting with a period of combined UDCA and terpene preparation administration seems to be a safe and effective method for retained CBD stones in elderly patients. A prospective study with randomization and a control group is required to confirm these results.

Endoscopy 2009; 41: 849-854
Effective “short” double-balloon enteroscope for diagnostic and therapeutic ERCP in patients with altered gastrointestinal anatomy: a large case series
M. Shimatani

Background and study aims:
Although endoscopic retrograde cholangiopancreatography (ERCP) is technically challenging in patients with altered gastrointestinal anatomy, a double-balloon enteroscope (DBE) permits examinations of a much longer segment of the small bowel than does a standard endoscope, and may be used to perform ERCP in such patients. Since only limited accessories are available for a conventional DBE, we performed ERCP with a “short” DBE, which has a 2.8-mm working channel and a 152-cm working length and for which conventional accessories are available, in patients with altered gastrointestinal anatomy, and evaluated this alternative technique.

Patients and methods:
In 68 patients with a Roux-en-Y total gastrectomy (n = 36), Billroth II gastrectomy (n = 17), or pancreatoduodenectomy (n = 15), ERCP (103 procedures) was performed with a “short” DBE.

Results:
Deep insertion was successful in 100/103 procedures (97 %). Cholangiogram was successfully obtained in 98/100 procedures (98 %). Treatment was accomplished in all 98 procedures in which a cholangiogram was obtained (100 %). Therapeutic interventions including stone extraction (n = 47), nasobiliary drainage (n = 38), stent placement (n = 36), sphincterotomy (n = 31), choledochojejunostomy dilation (n = 29), tumor biopsy (n = 10), and naso-pancreatic duct drainage (n = 1) were performed successfully. Complications occurred in 5/103 procedures (5 %), all in patients with Roux-en-Y reconstruction.

Conclusions:
Despite the relatively high rate of complications seen in patients with Roux-en-Y reconstruction, ERCP with a “short” DBE is effective in patients who have undergone bowel reconstruction.
Covered Wallstents for palliation of malignant biliary obstruction: primary stent placement versus reintervention
Laura C. Ornellas, MD, PhD

Covered self-expandable metallic stents (SEMSs) are designed to prevent tumor ingrowth and can be removed if necessary. Only limited comparative data are available on the performance of covered SEMSs after primary placement versus reintervention.

Objective
To assess the effectiveness and safety of covered SEMS placement either as primary treatment or reintervention in patients requiring palliation of malignant biliary obstruction.

Design
Retrospective clinical cohort study.

Setting
Tertiary referral center.

Patients
This study involved 104 patients with unresectable malignant biliary strictures.

Intervention
Covered biliary SEMS placement.

Main Outcome Measurements
Stent patency, technical success, and patient survival.

Results
Covered SEMSs were placed as primary treatment in 48 patients (46%), and reintervention was performed in 56 patients (54%). At 3, 6, and 12 months thereafter, the Kaplan-Meier estimated fractions of all patients with patent stents were 94%, 84%, and 58%, respectively. Covered SEMSs remained patent until the patient’s death in 75 of 89 nonsurvivors (84%). Although patency rates 3, 6, and 12 months after primary placement (100%, 93%, and 82%, respectively) were higher than...
those after reintervention (90%, 78%, and 48%, respectively), the differences were not statistically significant (P = .057). Overall, the most frequent adverse events were cholangitis (7%) and stent migration (4%).

Limitations
The distribution of stricture locations differed among the groups, and survival data suggested the presence of more extensive disease in the primary treatment group at baseline.

Conclusion
The clinical utility and safety of primary covered SEMS placement were confirmed. This study provides the most extensive evidence to date that reintervention with a covered SEMS can provide a useful palliative option.

GIE 2009; 70; 4:772-777

Combined endoscopic stent-in-stent placement for malignant biliary and duodenal obstruction by using a new duodenal metal stent (with videos)
Jong Ho Moon, MD

Background
Self-expandable metal stents (SEMSs) are an effective palliative treatment for malignant biliary or duodenal strictures, but endoscopic stenting for combined malignant biliary and duodenal obstructions remains technically difficult.

Objective
To evaluate the feasibility and clinical success rate of endoscopic double stent-in-stent placement by using a new duodenal metallic stent for the management of malignant biliary and duodenal obstructions.

Design
Prospective, observational clinical feasibility study.

Setting
Tertiary referral center.

Main Outcome Measurement
Technical and clinical success, complications, midterm outcome.
Patients and methods
Eight patients with inoperable malignant biliary and duodenal strictures were enrolled. Endoscopic placement of a biliary SEMS was performed through the mesh of the duodenal stent.

Results
The duodenal strictures were in the first part of the duodenum in 3 patients (type 1) and in the second part in 5 patients (type 2). Duodenal stents were successfully deployed in all patients. Endoscopic placement of a biliary SEMS through the mesh of the duodenal stent was successful in 7 (87.5%) of 8 patients. In 2 of 3 patients with type 2 duodenal strictures with failed bile duct cannulation, biliary stenting was successful by using the rendezvous procedure. Early complications occurred in 1 patient. The overall median survival after combined stenting was 91 days (range 36–314 days).

Limitations
Small number of patients and no comparison with other enteral stents.

Conclusions
Biliary stenting through the new duodenal metallic stent is technically feasible and has a high success rate. Combined endoscopic biliary and duodenal stent-in-stent placement is a promising solution for the palliation of malignant biliary and duodenal obstruction.

D. TIPS Stenting and related topics

The article was published as free.
The clinical significance of diastolic dysfunction in cirrhosis, a feature of cirrhotic cardiomyopathy, is unclear. The aim of this study was to assess the utility of E/A ratio, an indicator of diastolic dysfunction, to predict ascites clearance and mortality after transjugular intrahepatic portosystemic stent shunt (TIPS) insertion.

METHODS:
A total of 101 cirrhotic patients who received TIPS had pre-TIPS assessments of demographics, severity of liver dysfunction (Child–Pugh and Model for End-Stage Liver Disease (MELD) scores), renal function, hemodynamics, and cardiac function (two-dimensional echocardiography). An E/A ratio of 1 was used to indicate diastolic dysfunction. Patients were followed-up for a mean period of 24.62.4 months post TIPS.

RESULTS:
A total of 41 patients with an E/A ratio of 1 (group A), and 60 patients with an E/A ratio of >1 (group B) were studied. Group A had significantly higher MELD scores (14.01.0 vs. 11.40.8; P=0.03), because of higher serum creatinine levels (1075 vs. 866 mol/l; P<0.01). There was no difference in pre-TIPS systemic hemodynamics, systolic function, or portal pressure between the two groups. After TIPS, more patients in group B had ascites clearance (log rank, P=0.038), and the same patients had a higher probability of survival (log rank, P=0.046). There were three post-TIPS cardiac deaths in group A only. A multivariate analysis showed that an E/A of ratio 1 was predictive of slow ascites clearance (hazard ratio=7.3, 95% confidence interval=1.3–40.7, P=0.021) and death after TIPS (hazard ratio=4.7, 95% confidence interval=1.1–20.2, P=0.035).

CONCLUSIONS:
Diastolic dysfunction, indicated by reduced E/A ratio, is prevalent in advanced cirrhosis and is associated with reduced ascites clearance and increased mortality post TIPS, possibly related to worsening of hemodynamic dysfunction in the post-TIPS period.